ESTIMATES OF GROUP SIZE AND RATES OF INTERCHANGE BETWEEN HUMPBACK WHALES IN THE WHITSUNDAY ISLANDS AND HERVEY BAY, QUEENSLAND. *(ABSTRACT)* From 1993-1999 we spent 719 days in the Whitsunday Islands (298 days) and Hervey Bay, Queensland (421 days) studying humpback whale (*Megaptera novaeangliae*) utilisation patterns of these two important migratory destinations of Group V whales. A total 182 days (1,102 hours) were spent on the water in the Whitsundays, and 239 days (1,964 hours) in Hervey Bay. We photo-identified (on the basis of tail-fluke shots alone) individual whales 1,567 times. Comparison of photographs showed these dentifications included 1,212 whales, 315 observed first in the Whitsundays and 897 observed first in Hervey Bay. Of the 1,212 whales identified, 106 were photo-identified in both locations. Sighting data included date, time, GPS location, pod size, age/sex class of identified animal, sea state, and surface water temperature. Sex was determined for 215 whales (156 females and 59 males) either by genital photo (58 females and 48 males), presence of calf (98 females), or occurrence of singing (11 males). Data have been analysed to provide population estimates for each location and to determine the rate of exchange between the two areas. Photos have also been compared to the overall East Australia Humpback Whale Fluke Catalogue (now at 2,192 individuals). Resight histories and calving rate of identified females have been determined. The migratory characteristics of animals moving between the Whitsunday Islands and Hervey Bay has important implications for the management of whalewatching operations along the Queensland coast.

Greg Kaufman (e-mail: greg@pacificwhale.org), Patricia Naessig and Paul Forestell, Pacific Whale Foundation, 101 N Kihei Road., Kihei, Hawaii 96753 USA; Milani Chaloupka, Department of Zoology/CRC, University of Queensland, St Lucia 4072, Australia; 29 August 2000.

OVERWINTERING NORTH PACIFIC HUMPBACK WHALES IN ALASKAN WATERS. *(ABSTRACT)* Humpback whales (*Megaptera novaeangliae*) are present year-round in southeastern Alaska. It has been unknown if the whales observed in midwinter eventually migrate to a mating and calving ground or forgo migration for that year. This study documents true overwintering on a feeding ground, where a whale was sighted often enough to determine that migration could not have occurred that winter.

Sighting histories were compiled for individually identified whales present in southeastern Alaska between mid December and mid April, 1994-2000. These data showed that more than 150 different whales were present at some time during these seven winters. Whales included calves, yearlings, juveniles, adults, males, pregnant females (known by the presence of a calf later that year or the next winter), mothers still with their calves and females recently separated from their calves. Ten occurrences of overwintering were documented for nine whales; one in 1997, four in 1998, one in 1999 and four in 2000. One whale overwintered twice, in 1998 and 2000. The other whales were not sighted often enough to rule out a late migration from the feeding grounds or an early return from the mating and calving grounds.

The implications of overwintering humpback whales and an extremely staggered migration are significant. These findings could alter traditional methods of estimating key life history parameters because many population assessment models (i.e. population estimates) are dependent upon the assumption that all whales are available for sighting on the mating and calving grounds each winter.

Janice M. Straley, University of Alaska Southeast Sitka Campus, 1332 Seward Avenue, Sitka, Alaska 99835, USA (e-mail: jan.straley@uas.alaska.edu); 29 August 2000.

ECOLOGICAL RESEARCH AND THE HUMPBACK WHALE IN ANTARCTIC WATERS. *(ABSTRACT)* The Southern Ocean Cetacean Ecosystem Program (SOCEP) has been operating in Antarctic waters south of Australia since mid-1995. It aims to address ecological and management questions concerning cetaceans in the Southern Ocean, on a range of ecological scales, using a multispecies, multidisciplinary, collaborative approach. Humpback whales (*Megaptera novaeangliae*) have long been known to occur in patchy aggregations in particular regions of the Antarctic in the austral summer. SOCEP research has attempted to explain humpback and other baleen whale distribution, by relating it to underlying physical and ecological patterns and processes. These are now starting to become apparent. The annual cycle of spread and retreat of sea ice, combined with complex effects of physical and biological oceanography, result in beterogeneous summer productivity in different parts of the Southern Ocean. Understanding the role of ecosystem processes in humpback whale distribution and movements (within and between seasons and years) will allow us to determine important habitats for this species on their southern feeding grounds. In future this knowledge may help us to assess the effects of environmental changes on the ecosystem in general, and on the whales in particular.

Deborah Thiele and Peter Gill, School of Ecology and Environment, Deakin University, PO Box 423, Warrnambool 3280; Paul Hodda, Australian Whale Conservation Society, PO Box 12046, Elizabeth Street, Brisbane 4002, Australia; 29 August 2000.